

NEUTRAL
AUDIO

X-DREi PRO

Owner manual

NEUTRAL AUDIO wants to thank you for the trust you have placed in us by purchasing this product and we hope it will fill you with satisfaction for a very long time.

You should know that we have made every effort to be an exclusive and unique audio industry leader, with our advanced analog technology.

Jimenez

Signed J. M.

Important safety instructions

- Please read all the instructions.
- Don't use this equipment in humid environments.
- Do not use cleaning fluids. Use a dry or slightly damp cloth.
- Do not install near any heat sources or equipment that generates much heat.
- Inside there is no component that needs adjustment. Do not handle it, and refer to qualified service personnel in case of failure to prevent electrical accidents.
- Place the equipment on a flat surface with enough space for ventilation
- Do not cover ventilation vents.
- Before connecting the power outlet, be sure that you have the proper voltage and the earth is of good quality.
- Contact with Neutral Audio for any question not contained in this guide.
- Always disconnect the amplifier before handling connecting cables..

This product has been assembled by hand in Spain, member of the European Community. Audio and D.R.E.I. Neutral technology are trademarks and may not be used without permission from the owner. The system D.R.E.I. technology is patented and cannot be used without having been licensed by the owner..

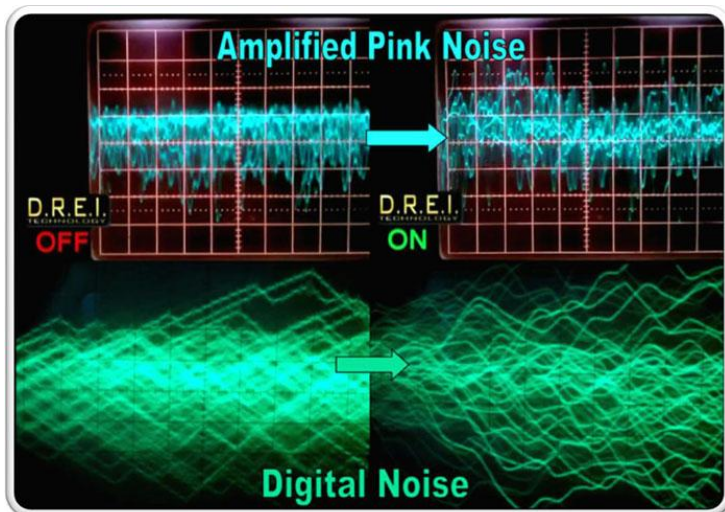
This NEUTRAL AUDIO electric device has been
Certified for use with the integrate D.R.E.I. system



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A short description



Observe extreme sharpness and detail of the output traces respect to the input.
Real images of oscilloscope.
This is what you are going to listen.

- Attenuates electronic intermodulation.
- Attenuates the intermodulation produced for near frequencies.
- Reinterprets harmful waveforms for the speakers and that hurts their performance to be amplified along with the rest of the signal.
- Reinterprets the distortion derived of the saturation and recovers lost energy.
- Increase the silence between notes.
- Controls response the lower frequencies for a strong bass response and prevent you subtract energy to other frequencies.

In the first place we are proud that NEUTRAL AUDIO is a part of your complex musical system. With this DREi tech, we have taken a big step forward in the audio industry.

This new and essential product is designed to increase the listening quality of sound and music, to levels well beyond currently normal. If all your audio system is at an appropriate level, we are convinced that **it will sound more neutral, transparent, detailed, crystalline and musical than you could ever have imagined.**

The X-DREI PRO is designed for include the DREI technology in the final sound. To do this it is necessary to insert this external module before the amplifiers.

Internally it uses a 6 high-precision buffers operating in parallel with no gain or volume control and controlled by the incorporated DREi tech.

To get a better signal to a level of musical purity that cannot imagine using several techniques, all analog:

With the above are achieved significant improvements:

- Greatly increases the global performance of the speakers.
- Increases performance and optimizes power amplifications.
- The crossover is more accurate when working with pure signals.
- The relationship between music / "other things" increases dramatically.
- You get more sound pressure at the same level of volumes.
- In headphones and monitors the improvement is very noticeable.
- Each instrument sounds more separately helping to optimize the mix.
- The instruments and voices sound closer and more presence.
- It is best distinguished the different sound levels.
- The speakers will deteriorate less with the use, especially the bass and treble.
- At the musicians bother them much less the returns of the drivers.
- A greater musical complexity, the greater improvement. Essential for complex instruments such as piano and classical guitar or with several voices on the scene.
- And much more. We invite you to discover.
-

PRO AUDIO, in this sector this device has an important use in live concerts and nightclubs and the extraordinary control it exercises over power and amplification allows higher sound levels without saturating rooms, produces fewer problems of sound transmission to adjacent rooms and floors and increases the intelligibility of the music. Less power is needed to achieve the required sound level, therefore facilitating compliance with acoustic regulations, increasing acoustic efficiency and extending the life of the power equipment and speakers thus increasing their profitability.

The audio tone is not modified, it keeps the characteristic "sound" of your equipment but at a much higher level.

The main function is as described but has other interesting features:

- You can change the soundstage using an external switch.
- In the exterior there is a switch to change into Duplex mode, thus doubling the X-DREI effect using only one input per device.
- Check & Bypass. When Off it bypasses input to output completely unchanged.

Designed by D.R.E.i. Technology



The insertion of the D.R.E.I. technology module, included in all the analog models manufactured by Neutral Audio makes our products exceptional and us pioneers because our devices incorporate this technology.

To bring out the full power of "DREI effect" sound and reducing electronic interactions that this module is able to offer, Neutral Audio has had to develop new amplification circuits and ingenious solutions to adapt them to each other.

For more information please visit our website www.neutralaudio.com

Multi-buffers

DREI tech separates sound into several musical signals and redirects them to 6 high precision buffers operating in parallel to finally get back to the original signal. Each of these buffers is managed by the DREI module.

It is a simplified circuit of the Multi-preamp, patented by the brand.

Do not confuse multi-channel systems used in home theatres with our product, which is only STEREO, even though we use various amplifiers per channel.

Everything is analog

One of the fundamental aspects of the **x** series and its exceptional sound is that it does not use any digital devices at any point and shows utmost respect to content. We have exclusively used analog technology; there is no digitalization used in any process.

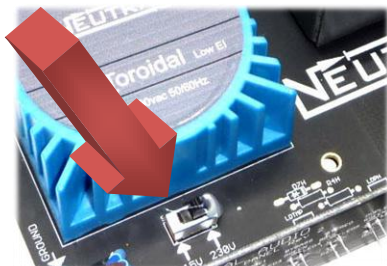
Build to last

Being top-level equipment, its construction and design has been done without cost concessions of any kind. We have used the most modern means available to make each of the component parts, using first quality components, the printed circuit boards and the connectors are gold plated, the toroidal transformer is sealed and isolated, and Premium electronic components etc.

The audio signal does not use internal wires and the signal track has been reduced to minimum on a single circuit board.

High strength treated steel and aluminum chassis.

Voltage change 115vac / 230vac



CAUTION:

Before removing the cover disconnect the plug from the wall

On the inside, removing the cover will find switch to change the mains voltage and select 115VAC or 230VAC. In the rear of the chassis can find the factory set voltage.

Connecting X-DREI PRO



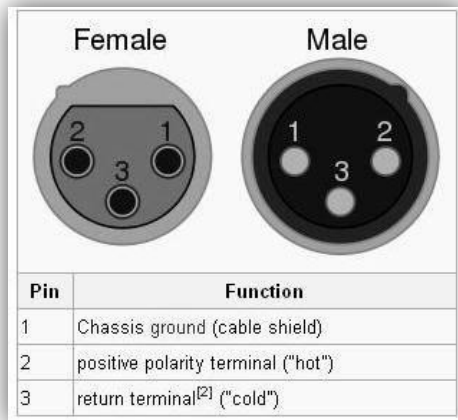
CAUTION:

Before making connections turn off the associated amplification and disconnect the plug from the wall socket.

Ensure that the supply voltage of the device matches that of your electrical supply. For safety grounding of your electrical installation should run correctly, if not it can introduce unwanted noise and interference in audio systems.

Make sure the voltage of the device matches that of your power supply. For safety the earthing of your electrical system must work properly; otherwise unwanted noise and interference may invade the audio system.

Note that the unit when off connects "bypass", the input signal is directly available to the output. After switching on, the blinking POWER red led lights, and until all internal modules are operational (5 sec. approx.) CHECK blue led light and DREI tech. starts to function



Our connections are very high quality and gold plated. We recommend periodic application of a specific product, (ask the dealer), to the connectors to prevent rust and loss of contact.

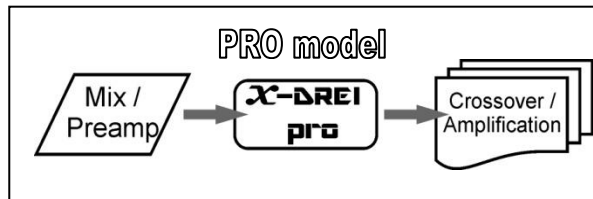
Balanced connections of input and output XLR connectors are the standard in
 The pin 1 = Ground
 The pin 2 = Hot
 The pin 3 = Cold

Input lines

The equipment has a pair of XLR (Balanced) inputs

You should connect the left channel to the "LEFT" (white) and the right channel to the "RIGHT" (red), but this is not obligatory.

Recommended connection



INPUTS

MIX OUT L/R

OUT DIGITAL INSERT

ANY SOURCE

OUTPUTS

CROSSOVER / PA

BACK INSERT

ENTRY MIXER

The usual and recommended way to connect the X-DREI PRO in your current audio system is as shown in the illustration above.

The X-DREI PRO is inserted between the MIXER and CROSSOVER / AMPLIFIER. In this mode with a single appliance, the X-DREI serves all the sources used.

At the input you can connect any mixer of any brand and technology, provided in the analog domain. If the system is fully digital, can be connected as an "insert" and derive the mixed L / R to the insert. Although it may seem that a D / A and other A / D required for this analogical insert may deteriorate the musical signal, improved X-DREI is much higher than the possible loss of the conversions.



Remember that this device does not have any gain or volume control, so the volume level of the output is the same as the input. If you connect a source directly, the sound is very loud and could damage your speakers.

Output to amplifier

You should connect the output marked "OUTPUTS" directly to the respective crossover or amplifier.

- If you have active speakers, directly connect the X-DREI at the entrance of its internal amplifier.
- For a mono duplex system, connect only one input channel corresponding to left and use any of the two outputs in the desired configuration. Repeat with the other X-DREI on the other channel. The advantages of this configuration are obvious, when the total channel spacing being sought. Do not forget to switch the external switch duplex / mono mode. You can only use the left input.

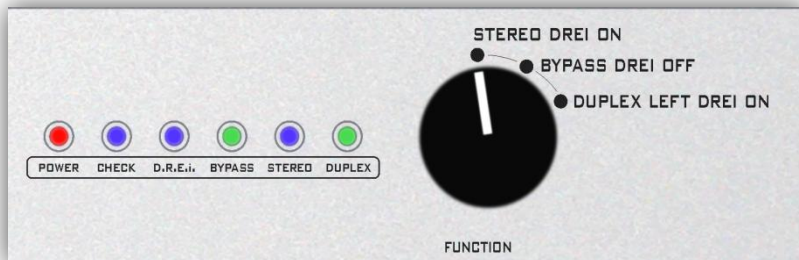


VERY IMPORTANT, make sure not to erroneously connect to the output DC connections, for example powered microphones (phantom). Damage the unit and would not be covered by warranty.

Front panel

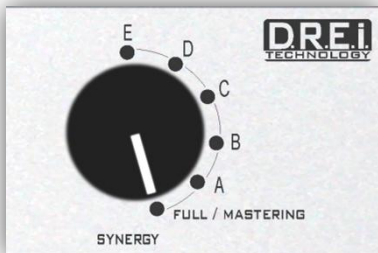


As you can see the design of the X-DREI PRO is extremely simple, as befits a device of its range where ease of use and high sound quality should dominate.



While "off" the bypass redirects each input to its output. There is no change in the connected equipment's impedance values when in bypass.

The Pro Model front controls. You can switch between stereo and mono/duplex using the DREI or switch to DREI "off" Bypass mode.



CHECK blue LED indicates that everything is correct. If X-DREi notice an abnormality turns off and the unit switches to bypass mode for uninterrupted sound.

The SYNERGY CONTROL switch is located on the control panel. The optimal choice depends on the all of the system, we recommend you try all the different settings and use the most appropriate one for you. As an initial help, we recommend using "FULL" (=off/mastering) or "A" for live/outdoor concerts, and "D" or "E" for closed rooms or equipment with many woofers. In next pages you can view more about this function.

SYNERGY Control

The D.R.E.i. tech The DREI tech always operates at 100% and its effects are independent of this adjustment.

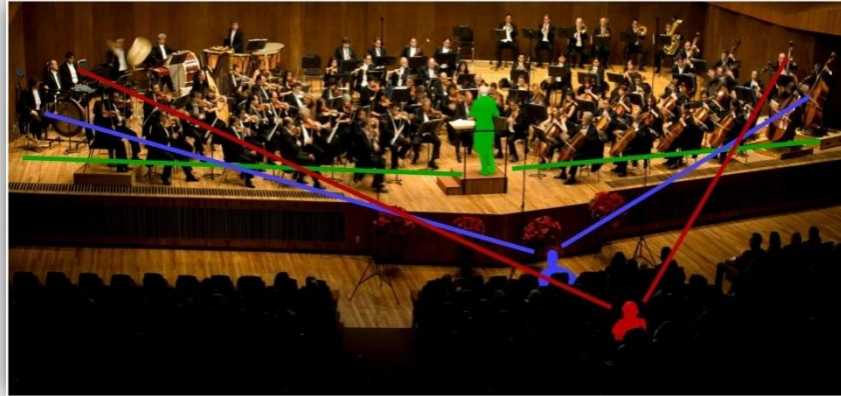
SYNERGY CONTROL: One of the advantages of the technology developed by Audio Neutral is that it allows you to vary the impulse response of each of the various buffers that make up each channel. With this new technique can be adapted to your requirements resulting Synergy turning the center button.

What led Neutral Audio to design this feature is very important. Bear in mind that the room/hall where music is played always alters the overall sound. Depending on the physical characteristics and elements of the room/hall and the type of speakers you have in your installation, the resulting sound can be far from ideal. It would be endless to explain all the possible situations and that is not the goal of this manual but generalizing, all equipment + room/hall may deliver a less crisp and more confused sound with severely uncontrolled base areas with little detail, in addition to lack, realism of amplitude and focus on the stage. All this can be improved by using this function.

To achieve maximum synergy between the room/hall and the sound equipment (especially the speakers), try using the different positions (6) by turning the switch to the one that best suits your preferences. There is no need to turn off the system.

Our recommendation is that you do not make a radical change in the beginning. For example, start at "B" (middle position) and eventually will rotate until its optimum position. You might be interested in different sources other positions.

A very clear improvement of the optimization system is extreme openness and three-dimensionality of the soundstage. This image will help you select the position you like best. The following explanations should not be taken too literally as they are only intended to explain as simply and graphically as possible what to expect from this technology and its results will largely depend on the associated elements and listening quality of the room/hall.

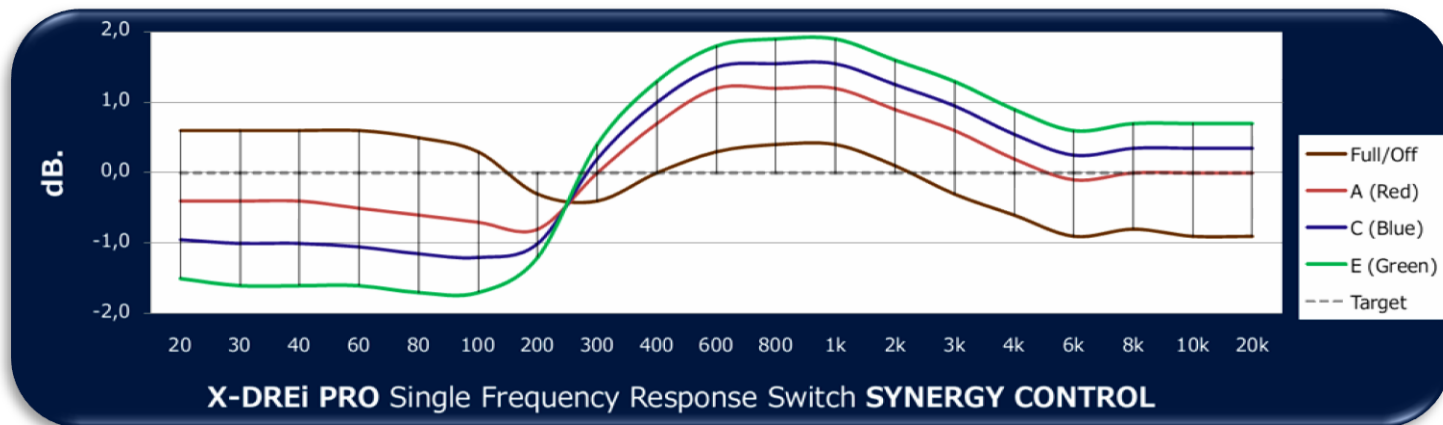


As you can see in our example, the "E" (Green) position gives you a close sound, with great base detail and only the first wave reflections the middles and trebles will be clean and straightforward, widely spaced and with plenty of air between the instruments as might be perceived by an orchestra director. Everything seems to become otherworldly and listening becomes pleasanter and less tiring..

On "B" (Blue) you will seem to move back a few rows into the audience, the bass will become more present and more instruments are fused together. The soundstage becomes a bit narrower.

In "A" (Red) the feeling of the room/hall becomes more present. The reverberations seem to increase, the bass becomes more powerful and confused and some details are lost. The middles and trebles attenuate because of the effect of the stored energy, in general the room/hall and the speakers are more easily saturated and the sound pressure level can't be so high and produces more listening fatigue.

SYNERGY = FULL produces no change or are less noticeable, being more balanced the operation of internal buffers. Equivalent to SINERGY = OFF



It produces an effect on the distribution of energy among all frequencies slightly alters the relationship between the high and low frequencies. In the graph has an approximation of the changes occurring in the different positions for a single frequency. **With music the difference is much smaller**, and has very little effect to the original mixture.

Do not forget that it is not a DAC, no EQ, no filter, no DRC, is something completely new and original has not heard before. The total energy output is equal to the input, but distributed differently. In no case goes up or down in certain frequencies, like EQ, where the output power is not the same as the input to have altered its proportions separately.

Guarantee conditions

- NEUTRAL AUDIO guarantees this product for a period of 2 years, or the time legally established in the country where it is purchased, as long as it is purchased from an authorized dealer.
- This guarantee covers any manufacturing defects.
- To qualify for this guarantee, you must go to a service centre authorized by NEUTRALAUDIO or the store where you purchased it, presenting your purchase invoice.

The Guarantee DOES NOT COVER:

- Damage caused by accident, misuse or abuse.
- Damage caused by external factors or natural tragedies.
- Theft or robbery.
- Damage caused by handling by persons not authorized by NEUTRAL AUDIO.
- Damage caused by other non-product components.
- Products purchased from unauthorized distributors.
- The shipment rates for the repair and return of the device to the customer.
- Any costs arising from installation or desinstallation of the product.

Any manipulation of the product by any person not authorized by NEUTRAL AUDIO automatically makes this guarantee null and void.

Consult your distributor as to your nearest technical assistance provider and how to contact him.

Technical features

All technical specifications contained in this manual are correct at the time of printing. However NEUTRAL AUDIO may have made modifications to them without notice.

- Line input XLR balanced
- Line outputs XLR balanced
- Frequency response 0-200000 Hz (extended up to 500,000 Hz)
- Total Distortion 0.04%
- Recommended maximum input voltage 15Vpp balanced
- Maximum output voltage 15Vpp balanced
- Input impedance 20 kohms RCA / 50 kohms balanced
- Output impedance 300 Ohm balanced
- Signal to noise ratio better than 110 dB
- Channel separation better than 100 dB
- IEC socket for power supply
- Maximum Consumption > 6 W
- Supply voltage 230VAC 50/60Hz. (or 115VAC), (using an interior switch).
- Dimensions 19" 1U
- Approximate Net Weight 3.8 kg

For more information contact your local Neutral Audio distributor,

NOTE FOR TECHNICAL EXPERTS:

This unit challenges the traditional method of the electronic measurement of sound. If you want to correctly interpret these values, consider talking to Neutral Audio regarding them.

NOTES:

www.neutralaudio.com

[**info@neutralaudio.com**](mailto:info@neutralaudio.com)

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